
UNIT 16 NON ORIGINAL DATABASES

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16.1 INTRODUCTION

In the latter half of the 20th century, a new database industry came forth with the development of computer science and communication technology. How to guarantee and even accelerate the growth of this new industry has now become one of the problems that demand prompt solution by policy-makers. In the database industry, developers have to spend lots of human and material resources in collecting, sorting out and arranging raw data before providing them to the public in an appropriate way.

With the advent of the digital era and the consequent increase in the creation and dissemination of electronic databases, calls have been made for a regime that would protect even unoriginal databases, i.e. databases that lack the requisite originality/creativity to qualify for copyright protection, but that nonetheless, involve a substantial investment/effort. The database owners are constantly required to make substantial investments to keep pace with the new developments. However it is argued that the traditional intellectual property regimes have failed to protect the interests of the database owners. Thus the database providers have lobbied with the lawmakers across the world to provide *sui generis* right in the contents of their database so as to safeguard the investments that they have to make in the collection, compilation and management of the databases. While laying down an appropriate mode of protection one must strike a balance among the interests of database developers, their competitors and the public, by protecting the developers from competitors' free ride on the one hand, and preventing the creation of any monopolisation on data on the other.

In the digital world databases are difficult to make but very easy to copy and disseminate. Piracy or unauthorized use/copying are a potential disincentive to the creation of new value-added databases. There is need for effective legal protection of databases so that the database providers have confidence to willingly disseminate data and thus make the information more readily accessible. Therefore, the main concern of the database industry while soliciting enhanced protection has been an effective remedy against the problem of infringement.

16.2 OBJECTIVES

After reading this unit, you should be able to:

- describe databases;
- explain the ways of protection of databases through intellectual property laws; and
- discuss the issue on *sui generis* protection of non original databases.

16.3 WHAT ARE DATABASES?

A database is an organized collection of data. Databases are collections or compilations of records that are organized for easy access and retrieval. The term originated within the computer industry, but its meaning has been broadened by popular use, to the extent that the European Database Directive (which creates intellectual property rights for databases) includes non-electronic databases within its definition.

There is no uniform definition of what is meant by databases from the legal or economic point of view. It is interesting to highlight that the definition in European Directive 96/9/EC, article 1.2, is extremely broad, characterising a database as “a collection of independent works, data or other materials arranged in a systematic or methodical way and individually accessible by electronic or other means”. Article 2(i) of the draft WIPO Database Treaty has defined a database in a similar fashion. Taking this broad approach, databases even extend to telephone directories or educational courses, including things as diverse as genetic or satellite information banks, dictionaries, meteorological records, horse racing results, TV program guides, collections of legal, commercial or financial information, newspapers, libraries, company brochures, compilations of natural or experimental observations in the fields of physics, chemistry, biology, indexes made by Internet search software agents may also come under this definition, etc.

The databases are a vital element in the development of a global information infrastructure and an essential tool in promoting economic, cultural and technological advancement. The database industry has been one of the most important bases of information industry, and a key element to measure the level of the modernisation of one country. Today the database industry means various commercial and noncommercial activities relating to the bibliographic, textual and statistical databases as well as the information, education and entertainment materials in the electronic form including audio, video and multimedia forms. The producers of databases usually include government agencies, State-owned enterprises, private companies, and other organizations such as research institutes, academies and universities. In the past years, government agencies or entities financed by the government were the main database producers in India.

In an information society, databases containing and cross-referencing all types of information and presenting such information in an easily accessible form and are of immense value. The use of digital and information technologies have made it economically feasible to collect, store, manage and deliver huge amounts of data at a time when continuously expanding databases have become the building blocks of knowledge. As a result of this the overall landscape of the database industry has altered considerably. Although databases can be in a variety of formats, the growth of databases in electronic formats, both as standalone products on media such as CD-ROMs and as online products and services, has increased the need for their legal protection.

Please answer the following Self Assessment Question.

Self Assessment Question 1	<i>Spend 3 Min.</i>
What are databases?	

16.4 PROTECTION OF DATABASES THROUGH INTELLECTUAL PROPERTY LAWS

Databases are protected as literary works within the copyright system. But for getting copyright protection a database has to pass the test of originality. And many of these databases are “unoriginal” in the sense that they do not meet the originality criterion under the principles of copyright recognised in the Berne Convention and the WIPO Copyright Treaty. As a result such databases are not protected by copyright. So, what should be the mode of protection of these non original databases? They can be protected using various tools of law and there is a great demand from the database industry for a *sui generis* system of protection which will grant them property rights over non original databases akin to the one granted under the copyright system. Let us discuss these modes of protection.

16.4.1 Copyright Protection of Databases

Under the national laws on copyright of most countries, databases that constitute an intellectual creation by reason of the selection or arrangement of its contents are protected.

The subject matter of copyright protection in India is provided in section 13 of the Copyright Act, 1957 which says, “Subject to the provisions of this section and the other provisions of this Act, copyright shall subsist throughout India in the following classes of works, that is to say; a. *original literary*, dramatic, musical and artistic works; b. cinematograph films; and c. sound recording.” Databases are protected under the Act as they come within the definition of literary works by virtue of section

2(o) of the Act which says, “‘literary work’ includes computer programs, tables and compilations including *computer databases*”. The Indian copyright law thus specifically recognises copyright protection for compilations and computer databases as literary works. But the rider of originality is appended to a literary work to be worthy of protection under section 13. That means only those databases which are original can be protected under copyright in India. If a database comes within the framework of the Act it will grant a bundle of exclusive rights on the owner of a database, namely: the right of reproduction in any material from including the storage on any medium by electronic means; right of publication; right of communication to the public or public performance; right to make a film or sound recording; right to make translations or adaptations. The first owner of copyright in a work is the author of the work. The author in relation to a database would either be the creator of the same and if the database is computer-generated then under section 2(d)(vi) of the Act, the person who causes the work to be created. This would mean the person who takes the initiative and responsibility for creating the database would be the author.

The next issue is to the exact purport of *originality* for a work to be thus protected under copyright. There are various approaches to it worldwide. One approach is the “sweat of the brow” doctrine, prevalent more in commonwealth countries, which makes compilations having just minimal originality worthy of copyright protection. The argument given in support is that “no man is entitled to steal or appropriate for himself the result of another’s brain, skill or labour even in such works”. This rationale has been followed in several cases in India whereby it has been held that a compilation of addresses developed by anyone by devoting time, money, labour and skill though the source may be commonly situated amounts to a ‘literary work’ wherein the author has a copyright.

The United States’ Supreme Court in *Feist v Rural Telephone* (1991), overruled the ‘sweat of the brow’ doctrine for copyright protection of factual compilations. The Court held that the criterion of originality is a Constitutional mandate and though not stringent, has to be satisfied. Thus it was decided that there is no copyright in Rural’s white pages holding that the end product is a garden-variety white pages directory, devoid of even the slightest trace of creativity. The Court raising the threshold of originality to more than a *de minimis quantum* of creativity held that though Rural’s selection of listings is selection of a sort, but it lacks the modicum of creativity necessary to transform mere selection into a copyrightable expression.

Courts in India have been generally liberal while adjudging what is original and what is not. But in a case before the Delhi High Court [*Eastern Book Company & Ors. v Navin J. Desai & Anr.*] involving law reports including copy-edited judgments, the strict doctrine propounded in *Feist* was preferred. The plaintiffs had also pleaded that the entire law report is a compilation or a database and entitled to copyright protection because it involved selection, collation, arrangement and coordination of various judgments which requires tremendous input of skill, labour, discretion, judgment and expenditure. The court held that changes in law reports consisting of changes of spelling, addition of quotations and corrections of typographical mistakes are trivial and no copyright exists therein. Though the court did not give a specific finding on the point of database protection, but the eventual refusal to recognise copyright in law reports suggests that copyright may not be always successful in protecting non-original databases.

Internationally, copyright protection of original databases is well established and harmonised through international treaties to that effect, such as the Berne Convention for the Protection of Literary and Artistic Works, 1886 (Berne Convention), the Agreement on Trade-Related Aspects of Intellectual Property Rights, 1994 (TRIPS Agreement) and the WIPO Copyright Treaty, 1996 (WCT).

Article 2(5) of the Berne Convention provides as follows: “Collections of literary and artistic works such as encyclopaedias and anthologies which, by reason of the selection and arrangements of their contents, constitute intellectual creations shall be protected as such, without prejudice to the copyright in each of the works forming part of such collections.” So, the Berne Convention limits its scope to original collections of literary and artistic works. Does this mean that there is no basis in the Berne Convention for the protection of original collections of other material, such as mere data? In recent years, a general consensus seems to have emerged that collections of material other than literary and artistic works are indeed subject to copyright protection under the Berne Convention, provided, of course, that they can be considered “works,” that is, that they are original.

Article 10(2) of the TRIPS Agreement states, “Compilations of data or other material, whether in machine readable or other form, which by reason of the selection or arrangement of their contents constitute intellectual creations shall be protected as such. Such protection, which shall not extend to the data or material itself, shall be without prejudice to any copyright subsisting in the data or material itself.” The WCT was concluded in December 1996, with the aim of updating international copyright norms, and came into force in March 2002. The WCT contains in its Article 5 a provision on copyright protection of databases, which, under the title “Compilations of Data (Databases)” provides, “Compilations of data or other material, in any form, which by reason of the selection or arrangement of their contents constitute intellectual creations, are protected as such. This protection does not extend to the data or the material itself and is without prejudice to any copyright subsisting in the data or material contained in the compilation.” The Diplomatic Conference also adopted, by consensus, the following agreed statement: “The scope of protection for compilations of data (databases) under Article 5 of this Treaty, read with Article 2, is consistent with Article 2 of the Berne Convention and on a par with the relevant provisions of the TRIPS Agreement.” Article 2 of the WCT, to which the agreed statement refers, states, under the heading “Scope of Copyright Protection”, as follows: “Copyright protection extends to expressions and not to ideas, procedures, methods of operation or mathematical concepts as such.”

This means that copyright protection might not be available for certain databases, depending on the level of originality required under the copyright law of a particular jurisdiction, even if substantial investments have been made to produce them. Databases that contain comprehensive information without selection in a straightforward manner, such as alphabetical or numerical order, may not be protected under copyright in all countries.

16.4.2 Protection of Databases with Technological Protection Measures

When a database is made available for access on the Internet, anyone in the world becomes capable to download the same free of charge, use it without restrictions, incorporate it into his own product and make the resulting product available in a

global network, hence competing with the product of the creator himself. In order to fight this loss of control over the database in the digital environment to a large extent the solution is being sought in technology itself. Such technological systems of protection include: anti-copy devices, access control, electronic envelopes, proprietary viewer software, encryption, passwords, watermarking, electronic lamination, user authentication, metering and monitoring of usage, encapsulating copyrighted works in a tamper-resistant electronic envelope, etc. Several industry and technology initiatives to set standards in various industries have emerged over the years, although none have yet established uniform standards for technological protection measures. The role of technology here would not only be for preventing the work from being stolen and misappropriated, but also for detecting infringements and misappropriations.

Along with the invention of technical measures for protecting copyright works in the digital networked environment, counter-technologies are developed to defeat those protection technologies making it possible to circumvent each and every technical protection measure by using technical means. So, the solutions devised by technologists are sought to be protected by law as otherwise those solutions would be modified by counter technologies, with impunity rendering the best access control mechanisms and security measures futile in want of legal sanctions. In this context Article 11 of the WIPO Copyright Treaty, 1996 obligates the members to provide “adequate legal protection and effective legal remedies against the circumvention of effective technological measures that are used by authors in connection with the exercise of their rights under that Treaty or under the Berne Convention and that restrict acts, in respect of their works, which are not authorized by the authors concerned or permitted by law”.

The Copyright Act, 1957 in its present form does not provide legal remedies against the circumvention of technological measures, the impending amendment in the law is expected to incorporate such a provision. The Drafting Committee set up by the Core Group on Amendments to the Copyright Act, 1957 has in the draft amendments incorporated a section for the Protection of Technological Measures. Therefore, if and when the Copyright Act is amended to include the said provision, the protection of databases through technological measures would also be enhanced. Though this kind of protection will be available only to those databases which qualify for copyright protection based on the principle of originality.

16.4.3 *Sui Generis* System for Protecting Databases

The database industry worldwide has consistently demanded for protection of databases that do not conform to the norms of copyright through another *sui generis* system of intellectual property protection. These demands have led to efforts and debates worldwide towards creating such a system. Prominent among them are the EU Directive on Databases and the WIPO draft treaty on Databases which are being discussed below.

16.4.3.1 European Union Directive on Databases

The European Union (EU) directive 96/9/EC of the European Parliament and of the Council of 1996 on the legal protection of databases is an intellectual property directive requiring EU member states to protect databases both by copyright and by a *sui generis* right that controls extraction and re-utilization of the contents of a

database. This directive introduces a *sui generis* right, explicitly protecting collections of facts regardless of any creativity. It also confirms that, if there is creativity involved in the creation of a database, that database is protected by copyright.

The Directive protects “databases in any form”. This definition not only covers electronic databases, but also paper databases such as telephone books, or microfilm collections. To qualify for the *sui generis* database protection, the creator of the database must show that there has been qualitatively and/or quantitatively a substantial investment in either the obtaining, verification or presentation of the contents. This is purely a “sweat of the brow” protection regime.

The owner of a protected database has the right to prevent extraction and/or re-utilization of the whole or of a substantial part, evaluated qualitatively and/or quantitatively, of the contents of that database. “Extraction” means the permanent or temporary transfer of all or a substantial part of the contents of a database to another medium by any means or in any form. The act includes downloading, copying, printing or any other reproduction in any form, electronic or not, temporary or not. In other words, also copying the database itself is “extraction” of the database. “Re-utilization” means any form of making available to the public all or a substantial part of the contents of a database by the distribution of copies, by renting, by on-line or other forms of transmission. This basically covers putting up a search and retrieval interface to the database, so that others can extract information from it. The accrual of a *sui generis* right to the database maker does not require the showing of a creative achievement or a novel contribution to the prior art; rather it accrues on merely showing that there has been qualitatively and/or quantitatively a substantial investment in the obtaining, verification or presentation of the contents. On this issue the Directive has come in for a lot of criticism and commentators have gone to the extent of saying that the fear of market failure and of chronic under protection that initially motivated the quest for a *sui generis* regime to protect electronic databases has thus given way to the creation of “mini-monopolies over information”. Though the term of the *sui generis* right in a database has been fixed at fifteen years, any substantial change in the database would qualify it for its own term of protection. In spite of all the criticisms, the Directive with its reciprocity provisions has triggered off strong demands from the database industry across the world for similar protective regimes.

16.4.3.2 The WIPO Draft Database Treaty

The Standing Committee of Copyright and Related Rights of the World Intellectual Property Organization (WIPO) has been discussing the possibility of introducing intellectual property protection of non-original databases through new international norms. It has been examining whether databases that do not presently qualify for copyright protection should also be protected. A draft treaty on Database protection was introduced at the WIPO Diplomatic Conference in December 1996, but it was not adopted because a number of delegations felt the need for further study of the subject before taking any decision.

Please answer the following Self Assessment Question.

Self Assessment Question 2

Spend 2 Min.

In which case was the ‘sweat of the brow’ doctrine overruled?

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16.5 OTHER LEGAL TOOLS TO PROTECT DATABASES

16.5.1 Database Protection under the Law of Contract

A contract is a “promise” or an “agreement” that is enforced or recognised by the law. With the advent of online databases, it is possible to make the end-user agree to the contractual obligations as deemed fit by the database provider. Thus, if the end-user fails to conform to any of the obligations stipulated in the contract, it could amount to breach of contract under the Indian Contract Act, 1872. Typically, the remedy for breach of contract is an award of money damages. The most common way of determining damages is to arrive at a sum which would restore the injured party to the economic position that he expected from performance of the promise.

16.5.2 Database Protection under Tort Law

A tort is a civil wrong, other than a breach of contract, for which the law provides a remedy. A tort is a breach of a non-contractual duty potentially owed to the entire world, imposed by law. Misappropriation, as a kind of tort, is the intentional, illegal use of the property or funds of another person for one’s own use or other unauthorized purpose. This law of misappropriation is also proposed as an effective remedy for database protection. The law of unfair competition which seeks to promote economic and business competition by prohibiting anti-competitive behaviour and unfair business practices is based on the tort doctrine of misappropriation. This can also be resorted to in the event of database being abused.

16.5.3 Database Protection under the Information Technology Act

Database protection has been conceived under the IT Act, 2000. Section 2(1)(o) of the Act defines “data” as “a representation of information, knowledge, facts, concepts or instructions which are being prepared or have been prepared in a formalised manner, and is intended to be processed, is being processed or has been processed in a computer system or computer network, and may be in any form (including computer printouts magnetic or optical storage media, punched cards, punched tapes) or stored internally in the memory of the computer”. Further Explanation (ii) to section 43 defines a database as “a representation of information, knowledge, facts, concepts or instructions in text, image, audio, video that are being prepared or have been prepared in a formalised manner or have been produced by a computer, computer system or computer network and are intended for use in a computer, computer system or computer network”.

It is clear that data and database have been given a wide definition by the IT Act. Section 43 which talks about cyber contraventions runs like this, “43. *Penalty for damage to computer, computer system, etc.*—If any person without the permission of the owner or any other person who is in charge of a computer, computer system or computer network,—

(b) downloads, copies or extracts any data, computer database or information from such computer, computer system or computer network including information or data held or stored in any removable storage medium; he shall be liable to pay damages by way of compensation not exceeding one crore rupees to the person so affected.”

Basically this provision of the IT Act incorporates the tort principle of wrongful damage and loss. The protection thus granted to databases is a broad one and is not dependant on whether the database was original or not within the sense of copyright. The focus of this provision is to prevent any unauthorized copying or appropriation of computer data.

Please answer the following Self Assessment Question.

Self Assessment Question 3	<i>Spend 3 Min.</i>
Define 'data' under the IT Act, 2000?	
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16.6 DEBATE ON *SUI GENERIS* PROTECTION OF NON ORIGINAL DATABASES

The debate on the intellectual property of non-original databases can be traced back to the case of *Feist v. Rural Telephone Service* (1991), in which the Supreme Court of the USA found that compilations of data that did not meet the conditions of originality and/or creativity (that is, that were based merely on “industrious effort” or “sweat of the brow”) did not merit protection under the relevant copyright legislation.

In Indian context, the Delhi High Court ruling in *Eastern Book Company & Ors. v Navin J. Desai & Anr.* has raised the threshold of the requirement of originality from that of skill, labour and judgment to a minimum level of creativity, which most databases would not be able to satisfy. Thus, there is bound to be a strong argument that since the law of copyrights has failed to protect the collections, there should be an alternate stronger protection. In fact it has been acknowledged by the IT Taskforce in its proposed National IT Policy that effective intellectual property protection system is a pre-requisite for development of creative works in the electronic medium.

The main concern of the database industry while soliciting enhanced protection has been an effective remedy against the problem of infringement. It is most vehemently contended that infringement/piracy could become a potential disincentive to the creation of new value-added databases. The advent of electronic databases has amplified the problem of piracy with the databases being expensive to make but cheap to copy. The calls by the database industry for additional protection have sparked off a vociferous debate on the level of protection justified so that the access to information is not unduly hampered.

The scientific and academic community has all along countered the demands of the database industry for additional protection. It is argued by them that the facts and ideas are building blocks of intellectual discourse and should not be removed from the public domain. These communities fear that the extent of protection sought by the database industry would inevitably lead to mini-monopolies over information. The scientific community argues that there is no justification for additional avenues of protection for databases, as the existing legal remedies are sufficient for the effective protection of database providers. The academic community therefore fears that IPRs in databases create an obstacle, through price rises and/or private appropriation, to the free circulation of ideas and information that has been the norm in the advancement of science over the last two hundred years.

Please answer the following Self Assessment Question.

Self Assessment Question 4

Spend 1 Min.

The first case on the IP of non-original database is

Let us now summarize the points covered in this unit.

16.7 SUMMARY

- Databases are collections or compilations of records that are organized for easy access and retrieval.
- The databases are a vital element in the development of a global information infrastructure and an essential tool in promoting economic, cultural and technological advancement.
- Under the national laws on copyright of most countries, databases that constitute an intellectual creation by reason of the selection or arrangement of its contents (original databases) are protected.
- The criterion for determining originality varies from country to country.
- The database industry worldwide has consistently demanded for protection of databases that do not conform to the norms of copyright through another *sui generis* system of intellectual property protection.
- Apart from IPRs databases can also be protected using the legal tools of contract, tort and unfair competition.

16.8 TERMINAL QUESTIONS

1. How can you use the provisions of the Information Technology Act, 2000 for protecting non original databases?
2. How databases can be protected under the copyright system?
3. Write an essay on the debate worldwide as to granting a *sui generis* intellectual property right to non original databases.

16.9 ANSWERS AND HINTS

Self Assessment Questions

1. A database is an organized collection of data. Databases are collections of compilations of records that are organized for easy access and retrieval.
2. Feist v Rural Telephone (1991).
3. Section 2(1)(o) of the IT Act, 2000 defines 'data' as a representation of information, knowledge, facts, concepts or instructions which are being prepared or have been prepared in a formalised manner and is intended to be processed, is being processed or has been processed in a computer system of computer network, and may be in any form (including computer printout magnetic or optical storage media, punched cards, punched tapes) or stores internally in the memory of a computer.
4. Feist vs Rural Telephone services (1991).

Terminal Questions

1. Refer to sub section 16.4.3 of the unit.
2. Refer to sub section 16.3.1 of the unit.
3. Refer to section 16.5 of the unit.